Lockheed JetStar

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Not to be confused with Lockheed L-133 Starjet.
For other uses, see Jet Star (disambiguation).

The **Lockheed JetStar** (company designations **L-329** and **L-1329**, designated **C-140** in US military service) is a business jet produced from the early 1960s to the 1970s. The JetStar was the first dedicated business jet to enter service, as well as the only such airplane built by Lockheed. It was also one of the largest aircraft in its class for many years, seating ten plus two crew. In addition to civilian use, the JetStar was procured for the executive transport role, and the reconnaissance role, of the USAF, the Navy, and the Coast Guard.

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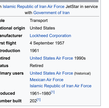

An Islamic Republic of Iran Air Force JetStar in service with Government of Iran

Role	Transport
National origin	United States
Manufacturer	Lockheed Corporation
First flight	4 September 1957
Introduction	1961
Retired	United States Air Force 1990s
Status	In service
Primary users	United States Air Force Medical Air Force Islamic Republic of Iran Air Force
Produced	1960–1978
Number built	204[1]

Development [edit source]

The JetStar originated as a private project within Lockheed, with an eye to winning a United States Air Force (USAF) requirement for an executive transport aircraft. Lockheed decided to continue the project on its own for the business market.[2]

The first two prototypes were equipped with two Bristol Siddeley Orpheus engines, the first of these flying on 4 September 1957. The second of these was also equipped with the wing-mounted "clipper tanks", which were originally to be an option. Lockheed attempted to arrange a contract to produce the Orpheus in the US, but when these negotiations failed it re-engined the second prototype with four Pratt & Whitney JT12s in 1958. The outer engines were mounted beside the inner ones, an arrangement that was later used on the Vickers VC10 and Ilyushin Il-62 airliners. The clipper tanks were removed and placed in the aft fuselage, where they served as fuel tanks. Although not applicable to production versions, the first of which flew in mid 1960,[3] These versions entered commercial service in 1961.

The dual engine pods on each side [4]

Noise regulations in the United States and high fuel consumption led to the development of the **731 JetStar**, a modification program which added new Garrett TFE731 turbofan engines with a fuller cowl and dorsal fin. The JetStar 731 also featured a new wing with winglets that was further stretched than the earlier models by more than a foot, which further increased the fuel capacity. The 731 JetStar could also have a somewhat more "modern" look about it, with a more rounded nose and a squared-off tail. Lockheed produced 44 new JetStars, designated the **JetStar II**. From 1978 to 1979, JetStar II models were produced with the turbofan engines and revised external fuel tanks. Both 731 JetStars and JetStar IIs featured longer range, and better runway performance compared to the original JetStar.

The JetStar 731 first flew on an aircraft owned by final delivery in 1979.[5] Most original JetStars have been retired, but many 731 JetStars and JetStar IIs are still flying in various roles, mainly as corporate and private aircraft.

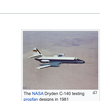
Design [edit source]

The JetStar has a fairly typical business jet design layout, with a swept wing and a cruciform tail. The wing has a 30° sweepback and features large full tanks at about half-span, extending some distance in front and behind the wing. The wings hold 10,000 pounds of fuel, and each slipper tank holds 4,000 pounds of fuel for a total fuel load of 18,000 pounds (8,200 kg) with a number of options available. The JetStar has a conventional tail with a 25° sweepback. The leading edge faces reduce the stalling speed by an additional three knots), while double-slotted trailing edge flaps span the entire wingspan and work in conjunction with the ailerons. The wing incorporates inflatable rubber boots for the removal of ice accumulated in flight. The horizontal stabilizer is mounted nearly halfway up the fin to keep it clear of the engines' jet blast. One feature is a low-set dorsal fin/antenna is mismatched by pointing the nose of the dorsal fin toward Richard Nixon, then to the Shah of Iran and finally, to Puerto Rican boy band Menudo.

The JetStar was originally produced for the USAF, but **C-140As** were flight inspection aircraft for the Air Force Communications Service and were used to perform airborne testing of airport navigational aids (navaids) from 1962 onwards. They began service during the Vietnam War and remained in service until the early 1990s. The 707-like cockpit C-140As were combined with the standard JetStar fuselage, and were powered by Pratt & Whitney JT12 engines. C-140As were deployed to southeast Asia during the Vietnam War, where, in addition to their main usual navaid testing, they would loiter off the coast and act as communications relays between the Pentagon and the battlefield.[6] The last C-140A to be retired was placed on static display at Scott AFB, Illinois.[citation needed]

An additional seventeen airframes were delivered to the USAF as **C-140Bs** and these primarily replaced the C-140As when it was decided to use the JetStar as a crew trainer. C-140As were deployed to southeast Asia during the Vietnam War, where, in addition to their main usual navaid testing, they would loiter off the coast and act as communications relays between the Pentagon and the battlefield.[7] The last C-140A to be retired was placed on static display at Scott AFB, Illinois.[citation needed]

USAF VC-140B JetStar, showing its wing sweep and slipper tanks. [8]


Elvis Presley's JetStar cabin, with [9]

The first prototype served as the personal transport of Lockheed's Vice President of Advanced Development Projects Kelly Johnson for some time. Elvis Presley owned two JetStars at different times, the second was named *Hound Dog II* and is on display at Graceland. Frank Sinatra also owned one.[citation needed] Additionally, one JetStar belonged to President Richard Nixon, then to the Shah of Iran and finally, to Puerto Rican boy band Menudo.

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The JetStar is one of the few aircraft of its class which allow a person to walk upright in the cabin, although to do this in the aisle you have to lean as the seats are raised on either side.[12] The windows are relatively large.

Operational history [edit source]

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The last Kingdom JetStar (N313JS) was retired in December 2019 and presented in March.[16] However, in November 2020, a JetStar (A7-NTC0599) was flown from Texas to Qatar.[17] Four privately owned JetStars are disassembled in Klamath Falls.[citation needed] In December 2020, another JetStar II (N179SN) was also ferried from Conroe, Texas to Klamath Falls, Oregon.[18]

Variants [edit source]

JetStar I
Business, executive transport aircraft, with accommodation for a crew of two and ten passengers, powered by four 3,300 lbf (14.7 kN) thrust Pratt & Whitney JT12A-8 turbojet engines.

JetStar II
New production version, powered by four 3,700 lbf (16.5 kN) thrust Garrett TFE731-3 turbofan engines, and fitted with revised external fuel tanks, 40 built.

JetStar 731
Modified version, fitted with four Garrett TFE731-3 turbofan engines and provided with redesigned external fuel tanks.

C-140A
Flight inspection aircraft for the US Air Force, similar to the JetStar I, five built.

C-140B
Passenger, cargo transport aircraft for the US Air Force, similar to the C-140A, 18 built.

VC-140B
VIP transport aircraft for the US Air Force, similar to the C-140B, six built.

C-140C
Two JetStar IIs were ordered by the United States Navy, originally designated UV-1, but not delivered.

T-40
US military designation for a proposed trainer version of the C-140 for evaluation and test.

A&I JetStar
Conversion by American Aviation Industries from General Electric CF34 engines in place of the four JT12 turbojets or TFE731 turbofans which first flew on 5 September 1986.[19] Only one aircraft was converted.

Operators [edit source]

Civil operators [edit source]

Algeria
- Air Algérie

Canada
- Department of Transport[20] former operator

Iraq
- Iraqi Airways[20][21]

Mexico
- TAESA[22][23]

Puerto Rico
- Menudo[24]

United States
- Eastern Airlines[20][21][25]
- Federal Aviation Administration[21]
- National Aeronautics and Space Administration[21]

Military and government operators [edit source]

West Germany
- German Air Force[21] former operator

Indonesia
- Indonesian Air Force[21] former operator

Iran
- Islamic Republic of Iran Air Force

Iraq
- Iraqi Government[21]

Kuwait
- Kuwait Government[21]

Libya
- Libyan Arab Air Force[21]
- Libyan Government[21]

Mexico
- Mexican Air Force

Saudi Arabia
- Royal Saudi Air Force[21]

United States
- United States Air Force[21]

Accidents and incidents [edit source]

- On January 5, 1995 an Islamic Republic of Iran Air Force (IRIAF) JetStar crashed during an emergency landing, killing all 12 on board including General Mansour Sattari, commander of the IRIAF.[citation needed]

Aircraft on display [edit source]

Canada
- C-FDTX (s/n 5018) L-1329 *JetStar II* – The Canada Aviation and Space Museum in Ottawa, has an L-1329 JetStar II that the Department of Transport used to carry government officials and foreign dignitaries.[26]
- C-FDTF (s/n 5088) L-1329 *JetStar II* – The Atlantic Canada Aviation Museum has a JetStar that was used by the Canadian Prime Minister and other government officials.[27][28]

Indonesia
- A-3446 (s/n 5046) L-1329 *JetStar II* – Used as VIP aircraft of Indonesian government, nicknamed "Sapta Marga". On display at Dirgantara Mandala Museum Training Centre (CVMD) in Yogyakarta.[29]
- A-1645 (s/n 5055) L-1329 *JetStar II* – Used as VIP aircraft of Indonesian government, nicknamed "Dirgantara". On display at Dirgantara Mandala Museum in Yogyakarta.[30]

Mexico
- 3908 (s/n 5144) L-1329 *Jetstar II* - On display at the Museo Militar de Aviación at Santa Lucía Air Force Base.[31]

United Kingdom
- N234JS (s/n 5001) L-1329 *JetStar* – The prototype JetStar is undergoing restoration at the Museum of Flight's Restoration Center in Everett, Washington.[32] This aircraft is one of only two JetStars with only two engines.
- N717JE (s/n 5002) L-1329 *JetStar* - On static display in false USAF marking at the 89th Airlift Wing Base Operations and the AMC Air Terminal at Andrews AFB, Maryland.[33][34] Former NASA JetStar is on display at the Joe Davies Heritage Park, Palmdale, California.[35]
- N777EP (s/n 5004) L-1329 *JetStar II* - Owned by Elvis Presley in his later years and named *Hound Dog II*, on display at Graceland, Memphis, Tennessee.[36] This is one of two JetStars owned by Elvis and given to the Graceland collection.
- 59-5958 (s/n 5011) C-140A - Preserved at the Travis Air Force Base Heritage Center in Fairfield, California.[37]
- 59-5959 (s/n 5012) VC-140B - The Museum of Aviation next to Robins Air Force Base has a VC-140B on display.[38]
- 61-2499 (s/n 5020) VC-140B - Pima Air and Space Museum, adjacent to Davis-Monthan AFB in Tucson, Arizona.[39]
- 61-2490 (s/n 5029) VC-140B - Presidential Lockheed JetStar II on display at the Lyndon B. Johnson National Historical Park.[40][41]
- 59-5959 (s/n 5030) C-140A - In the Scott Field Heritage Air Park at Scott AFB, Illinois.[34][35]
- 61-2492 (s/n 5031) VC-140B - In the Presidential Aircraft collection of the National Museum of the United States Air Force, Wright-Patterson AFB, Ohio.[34][21]
- 59-5962 (s/n 5032) C-140A - Preserved at Edwards Air Force Base in Edwards, California.[34]
- 62-4197 (s/n 5041) C-140B - Pima Air and Space Museum, adjacent to Davis-Monthan AFB in Tucson, Arizona. Aircraft has been given an artistic paintjob, named "Spy Tiger" by artist Andrew Antlitz.[42]
- 62-4200 (s/n 5044) C-140B - Pima Air and Space Museum, adjacent to Davis-Monthan AFB in Tucson, Arizona. Aircraft has been given an artistic paintjob, named "Black Ice Supersonic" by artist Kenny Scharf.[43]
- 62-4201 (s/n 5045) C-140B - Hill Aerospace Museum, Hill Air Force Base, Ogden, Utah, this was confirmed by former members of the 89th SAM Base Andrews Air Force Base in Maryland.[citation needed]
- N428BA (s/n 5058) L-1329 *JetStar II* - On display at the Aviation History and Technology Center adjacent to Dobbins Air Reserve Base in Marietta, Georgia.[44]
- N313JS (s/n 5066) L-1329 *JetStar 731* - Preserved for display at the Aviation History and Technology Center adjacent to Dobbins Air Reserve Base in Marietta, Georgia.[45]
- N313JS (s/n 5087) L-1329 *JetStar 731* - Forward fuselage preserved at the Planes of Fame Museum in Chino, California. Painted in false US Air Force colors.[46]
- N511TD (s/n 5141) L-1329 *JetStar II* - On display at the Greater Saint Louis Air & Space Museum, Cahokia, Illinois.[47]
- XB-DUH (s/n 5157) L-1329 *JetStar II* - At the entrance to Dodson International Parts in Rantoul, Kansas with tailnumber N5DH3K.[48]
- N170MD (s/n 5161) L-1329 *JetStar II* - The Miami Auto Museum in North Miami, Florida has a complete JetStar on display inside the museum.[49][48]
- N377SA (s/n 5229) L-1329 *JetStar II* - On display at the Pacific Coast Air Museum in Santa Rosa, California.[50]
- N77C (s/n 5232) L-1329-25 *JetStar II* - On display at the TNA Museum at Charles B. Wheeler Downtown Airport, Kansas City, Missouri.[51]

Specifications (JetStar II) [edit source]

Data from Lockheed aircraft since 1913[52]

General characteristics

- **Crew:** two: pilots & typically one flight attendant
- **Capacity:** 8–10 passengers
- **Length:** 60 ft 5 in (18.41 m)
- **Wingspan:** 54 ft 6 in (16.59 m)
- **Height:** 28 ft 1 in (8.72 m)
- **Wing area:** 542.5 sq ft (50.4 m²)
- **Empty weight:** 24,750 lb (11,226 kg)
- **Gross weight:** 41,500 lb (18,840 kg)
- **Max takeoff weight:** 44,500 lb (20,185 kg)
- **Powerplant:** 4 × Garrett TFE731-3R turbofan, 3,700 lbf (16 kN) thrust each

Performance

- **Maximum speed:** 547 mph (883 km/h, 476 kn) at 30,000 ft (9,145 m)
- **Cruise speed:** 504 mph (811 km/h, 438 kn)
- **Range:** 2,995 mi (4,820 km, 2,604 nmi)
- **Service ceiling:** 43,000 ft (13,105 m)
- **Rate of climb:** 4,150 ft/min (21.1 m/s)

Notable appearances in media [edit source]

Main article: Aircraft in fiction § Lockheed JetStar

See also [edit source]

Aircraft of comparable role, configuration, and era
- British Aerospace 125
- Gulfstream III
- Learjet 25
- McDonnell 119
- North American Sabreliner

References [edit source]

Notes [edit source]

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Categories: Lockheed aircraft | 1950s United States business aircraft | Quadjets | Low-wing aircraft | Cruciform tail aircraft | Aircraft first flown in 1957

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